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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/865,971

05/25/2001

Jeffrey A. Kleck

7175 US

9219

7590

07/13/2004

Francis I. Gray
TEKTRONIX, INC.
P.O. Box 500, MS 50-LAW
Beaverton, OR 97077

EXAMINER

LUGO, DAVID B

ART UNIT

PAPER NUMBER

2634

3

DATE MAILED: 07/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,971

Applicant(s)

KLECK ET AL.

Examiner

David B. Lugo

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 11, 17-21 and 23-25 is/are rejected.
- 7) ☒ Claim(s) 4-10, 12-16 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings filed in this application are objected to for being informal. Applicant is encouraged to submit formal drawings in response to this Office action so the formal drawings may be reviewed prior to allowance to avoid any unnecessary delay that may occur when the application is allowed.

Specification

2. The abstract of the disclosure is objected to because it is greater than 150 words.

Correction is required. See MPEP § 608.01(b).

Claim Objections

3. Claims 1-22 are objected to because of the following informalities:

- a. Claim 1, line 6, "UT" should be defined in the claim.
- b. Claim 7, line 7, "the last state" should be --a last state--.
- c. Claim 12, in the phrase "converting an NRZ serial data stream to an RZ serial data stream as the serial data stream input to the down converting means", it is unclear if the "RZ serial data stream" is intended to be "the serial data stream input to the down converting means". Clarification is required.
- d. Claim 13, lines 6-7, the phrase "for the serial data stream" is unclear and should be clarified.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 17-19 and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Iijima U.S. Patent 5,692,009.

6. Regarding claim 1, Iijima discloses a jitter measuring system where a serial data stream is downconverted to a low rate serial stream via mixer 230 (Fig. 3) and jitter is measured from the low rate serial stream (col. 6, lines 25-53), where the jitter in UI is considered to be the same for the serial data stream and the low rate data stream.

7. Regarding claim 2, Iijima further discloses a filter for generating an output signal S6, considered a low rate clock, from the low rate serial stream, where jitter is measured from the low rate clock signal S6.

8. Regarding claim 3, Iijima further discloses a filter for generating an output signal S6, from the low rate serial stream, where jitter is measured from the output signal S6.

9. Regarding claim 17, Iijima further discloses a mixer 230 for mixing the input data stream with the signal generated by oscillator 226, and a band pass filter for selecting the low rate serial stream (Fig. 3).

10. Regarding claim 19, the selecting means is a bandpass filter having the mixed serial data streams as an input and the low rate serial stream as an output.

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11. Regarding claims 18 and 20, the mixer 230 receives the serial data stream and the oscillator signal as inputs and a spectrum of mixed serial data streams as an output.
12. Regarding claim 23, the frequency of the oscillator signal generated by VCO 226 is tunable.
13. Regarding claims 24 and 25, the center frequency, f_0 , of the selecting means is tunable and set to the detected frequency (col. 4, lines 48-50).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima.
16. Regarding claim 11, Iijima discloses a jitter measurement system as disclosed above, but does not disclose that the serial stream is digitized to produce a sampled serial stream.
17. However, it is well known in the art to digitize a signal to enable digital processing.
18. It would have been obvious to one of ordinary skill in the art to digitize the serial data stream and process it digitally because digital circuits are smaller and less costly than analog circuits performing similar functions.
19. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iijima in view of Davis U.S. Patent 5,377,226.
20. Regarding claim 21, Iijima discloses a jitter measurement system as disclosed above, but does not disclose an anti-aliasing filter for filtering the serial data stream.

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21. However, anti-aliasing filters are well known in the art. For example, Davis discloses the use of anti-aliasing filters for removing unwanted sidebands, thus leaving the desired information (col. 11, lines 29-32).

22. It would have been obvious to one of ordinary skill in the art to use an anti-aliasing filter as disclosed by Davis in the system of Iijima in order to remove unwanted sidebands from the signal.

Allowable Subject Matter

23. Claims 4-10, 12-16 and 22, as well as multiple dependent claims 11, 17-21 and 23-25 when depending from any one of claims 4-10, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and amended to overcome the objections set forth in this Office action.

24. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record fails to teach a jitter measurement system comprising recovering a low rate NRZ signal which includes means for generating a phase signal indicating when the low rate serial stream provides meaningful phase information, and means for clocking the low rate serial stream as a function of the phase signal with a clocking signal derived from the low rate serial stream to produce the low rate signal, as recited in claim 4.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **David B. Lugo** whose telephone number is **(703) 305-0954**.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at **(703) 305-4714**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

P.O. Box 1450

Alexandria, VA 22313-1450

or faxed to:

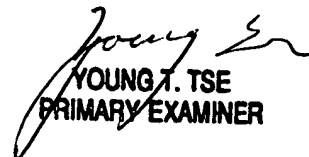
(703) 872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

dl

7/1/04


YOUNG T. TSE
PRIMARY EXAMINER